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ABSTRACT

Highlights of a followup study involving 1,179 remedial reading students in Rhode Island, grades 2 and 4, were examined. Since the study focused on determining the effect of Title I programs beyond one school year, the sample included students who did and did not continue to receive Title I services. It was not possible to determine whether each student had received these services prior to the study. Findings were based on the assumption that without Title I intervention, standard scores on the California Achievement Tests would remain at the same percentile from one testing period to the next. After the first year, students who left the program scored significantly higher than their counterparts; both groups exceeded scores expected without Title I intervention, using pretest scores as a basis of comparison. After the second year, using first year posttest scores for comparison, students were either at or below the level expected without treatment. Use of the original pretest score as the comparison criterion may be the most reasonable approach, since it is unlikely that disadvantaged students can maintain rapid rate of achievement gained during intensive remedial instruction. (CP)

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A FOLLOW-UP STUDY OF RHODE ISLAND TITLE I PARTICIPANTS

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Compensatory education programs in Rhode Island, funded under Title I of the Elementary and Secondary Education Act and Rhode Island State Section 4, have provided a variety of special programs and services for the state's students. In fiscal year 1974-75, the largest portion of these funds was allocated to remedial reading services. These programs offer instruction in all school districts to individuals or small groups of children, based upon a diagnostic-prescriptive model. Under this approach each student's skills are evaluated and particular weaknesses are identified. Individualized programs for each student are then developed in order to build upon the child's strengths and remediate his or her weaknesses.

The Tenth Annual Evaluation of Title I for the fiscal year 1974-75 by the Rhode Island Department of Education included an assessment of the effectiveness of remedial reading services provided during that year. This investigation presents the highlights of a follow-up study of the reading achievement of children who were enrolled in Title I/Section 4 remedial reading programs during the school year 1974-75. The study was conducted during Spring of 1975-76 school year, and included both children who remained in Title I/Section 4 programs during 1975-76 and children who were no longer enrolled in such programs. The study included those children who were in grades 2 and 4 in 1974-75 and assessed their performance in this and the following year.

Purpose

The principal focus of this study was to determine the effect of Title I programs beyond a single year. For this reason the selected sample includes both students who were in the program for both years and

those who did not continue in the program beyond the first year. For the purposes of the study, these groups are referred to as the "Two-Year Group" and "One-Year Group" respectively. It should be noted, however, that no reference is made to whether or not students received Title I services previous to the 1974-75 school year.

Given the remedial nature of the service provided by the Title I program, one would expect that as a result of program participation both groups would show greater gains in reading achievement during the first year than would be expected on the basis of maturation and normal classroom instruction alone. The research question addressed is whether, during the follow-up year, the One-Year Group maintains gains made in the first year after leaving the Title I program, and whether the Two-Year Group continues to show improvement in reading achievement.

METHOD

Sample

Participants in the study were second-and fourth-grade students identified as receiving remedial reading services under Title I and State Section 4 in Rhode Island during the academic year 1974-75. The follow-up study included children who received remedial services in the 1974-75 year alone and those who received services in both 1974-75 and 1975-76.
It should be noted that those students referred to as second-graders were in the second grade during 1974-75 and in the third grade in 1975-76. Similarly, the fourth-graders were in the fourth grade during the first year and in the fifth grade during the follow-up year.

Table 1 shows the number of students who participated in each grade and in each research group. The reading achievement scores for all 1,179 students were analyzed in the course of the study.

TABLE 1

Number of Students Participating in the Study
by Research Group and Grade Level

TITLE I STATUS	GRADE LEVEL 2	GRADE LEVEL 4	TOTAL
Two-Year Group	294	174	468
One-Year Group	389	322	711
TOTAL	633	496	1179

Instrumentation

The instrument adopted for the assessment of reading achievement was the California Achievement Test (CAT). The CAT, which yields a vocabulary and comprehension score as well as a composite of the two, is the test which is traditionally administered each year to students in Title I programs on a pre-post basis in the course of program participation. According to publishers' specifications, performance on the CAT was analyzed in terms of percentile ranks and Achievement Development Scale Scores (ADSS), which are a form of standard score. For purposes of the study, all raw scores were converted to percentile and ADSS scores using publishers' norming tables for the appropriate level, form, and period of administration.

Data Analysis

All of the analyses conducted involve comparisons between groups, either between the Two-Year and One-Year Groups at a given point in time, or between a group and itself at two different points in time. The basic data (dependent variables) for all analyses are the Achievement Development Scale Scores (ADSS) for the Vocabulary and Comprehension subtests of the CAT and the composite score from the same test. It should be noted that while the raw composite score is a simple sum of the Vocabulary and Comprehension raw scores, the derived ADSS for the composite is not a simple sum of the two subtest ADSS scores. To assess differences between observed score two types of analysis were employed in assessing the differences between observed scores-analysis of variance and analysis of covariance. These analyses determine the statistical significance of differences between sets of scores. They were employed in evaluating the comparisons between groups and between the achievement levels of a group at different points in time. In addition, a t-test was used to assess the difference between predicted (expected) and observed scores for each student group. For each of these analyses, the predicted score is based on the students' expected achievement without remedial reading services. Operationally, this involves the assumption that without Title I services, the average ADSS of the group will remain at the same percentile level from one testing period to the next. Thus, the predicted ADSS scores are based upon consideration of the percentile rank of this particular group at a time prior to a posttest.

RESULTS

A summary of major findings is presented here because of the magnitude and complexity of the analyses. Complete analysis information is available in the technical results report for this study.

Differences Between Groups

- While there were generally small insignificant differences in reading achievement at pretest time, by the end of the 1974-75 school year the One-Year Group scored significantly higher than the Two-Year Group on most measures.
- In almost every case the Two-Year and One-Year Groups were virtually identical in reading achievement at the end of the follow-up year, 1975-76.

Differences Between Predicted and Observed Scores

- Both groups significantly exceeded the scores that would have been expected without Title I intervention on every measure except one during the first year, 1974-75, when the pretest scores were used to derive the no-treatment expectation.
- During the second year, 1975-76, the second- (then third-) graders scored at the level expected without program intervention for both groups. For fourth- (then fifth-) graders, the Two-Year Group was at the level expected without treatment, while the One-Year Group was below the expected level. For these analyses the higher end of the first year posttest score was used as the predictor for the no-treatment expectation.

. Across the two-year period of this study, students in both groups exceeded the achievement which would have been expected on the basis of the pretest (before-treatment) scores.

Differences Across Groups Over Time

. Students in both groups continued to gain in absolute achievement (Achievement Development Scale Scores) throughout the two years of the study. More rapid increases were evident in the first year (1974-75) with slower gain rates occuring in the second year.

. In terms of relative achievement, students in both groups achieved substantially higher percentile scores than they did upon entering the program. However, when end of first year percentiles are used as the baseline, end of second year percentiles are lower in both groups, than at the end of the first year.

DISCUSSION

The data indicated that positive results have occurred in Rhode Island compensatory education reading programs over a two year period. Students increased in absolute achievement measures over the two years and, across the two year period, exceeded what would have been expected if students had not received compensatory education instruction. If the second year is reviewed in isolation, with the posttest of the first year used as the basis of comparison or prediction, the results become more bleak. Students did not exceed the predicted levels when the higher first posttest score was used to derive the no-treatment expectation nor did they maintain the percentile rank that had been achieved during the first year.

Several papers presented at the recent American Educational Research Association Convention in April, 1977, indicated that using the original pretest score as the predictor or criterion may be the most reasonable approach since it is highly unlikely that severely disadvantaged students will be able to maintain the rapid rate of gain achieved during intensive remedial instruction. A study (DeVito and Long) indicated dramatic drops in achievement percentiles among Title I students during the summer. They attributed this drop to forgetting due to disuse of skills as well as crossing levels of the testing instruments. A further study (Pelavin and David) also found these dramatic summer drops for disadvantaged students and pointed to the fact that very different interpretations of "success" in a program could be made depending on which score is used to derive a no-treatment. An additional investigation by Ozenne found similar results and mentioned similar problems.

The results of this study should be viewed in light of the following cautions and limitation.

1) While the study categorized students as members of either the One-Year or Two-Year Group for analysis purposes, it should be noted that this categorization pertains only to the two school years involved, 1974-75 and 1975-76. It was not possible to determine for each student the number of years he or she had received Title I/Section 4 services prior to the 1974-75 school year.
2) The study refers to reading achievement only and should not be used to make inferences about the effectiveness of compensatory areas such as mathematics, language arts, or other instructional areas.
3) Second pretest scores were unavailable so the magnitude of summer drop is unknown.
4) The California Achievement Test is a general, norm-referenced instrument and may not adequately reflect the different objectives of different Title I/Section 4 reading programs.
5) The data should not be generalized beyond the grades included in this study and are not statistically generalizable beyond the state of Rhode Island.
6) Students who were exited from the program after one year exhibited, as a group, higher scores than the group that remained for two years. This study does not provide any information about the nature and approach of the instruction the child returned to upon release from compensatory programs.

7) No information can be provided about the achievement of the One-Year Group had they been allowed to receive a second year of service.

8) The results of this study do not provide information on the effects over a longer time period. This study is a one-year follow-up examination.